

RESPONSE AND REQUEST FOR RECONSIDERATION

Support

Applicants have amended claim 1 to include the limitations of claims 9 and 10. Support for these amendments can be found in original claims 9 and 10 and on page 8, line 19 to page 9, line 12 of the specification.

Applicants have also amended claim 1 to replace an “is” with “comprises” when describing the medium substantially free of to free of sulphur. Applicants do not believe that this amendment changes the scope of the claims but and further point out that support for the amendment may be found at page 5, line 30 to page 6, line 8.

Applicants have added new claim 21 which depends on claim 1 and requires the medium substantially free of to free of sulphur to comprise an oil of lubricating viscosity. Support for new claim 21 can be found on page 6, lines 26-31 of the specification.

Applicants have cancelled claims 9, 10 and 20.

Remarks

The Examiner rejected claims 1-5, 9 and 10 under 35 U.S.C. §103(a) as being unpatentable over WO 02/102942. Applicants respectfully disagree.

The Examiner contends that WO 02/102942 discloses a fuel additive detergent composition comprising a succinic acylating agent/amine reaction product, where the fuel has a sulphur content of 0.002% by weight or less, and where the additive may also include an aliphatic hydrocarbon solvent. The Examiner notes that WO 02/102942 fails to teach the sulphur content or flash point of the solvent, but concludes the skilled artisan would have chosen a low sulphur or sulphur free solvent and would have chosen a solvent with a high flash point, thus making Applicants’ claimed invention obvious under the reference. Applicants respectfully disagree.

WO 02/102942 discloses fuel compositions containing a detergent/dispersant additive prepared by reacting an amine with hydrocarbyl substituted acylating agent in a solvent containing (i) quantities of sulphur above Applicant’s claimed range (such as 330 neutral mineral oil, used in Example F of the reference) and/or (ii) an aromatic solvent including Solvesso® (a high boiling point aromatic solvent, used in Example G of the reference).

In contrast Applicants’ present invention requires that the medium substantially free of to free of sulphur is an aliphatic solvent with a flash point of 120°C or higher. Furthermore, the Applicants have unexpectedly discovered improved performance of a fuel composition prepared from a detergent/dispersant additive formed in an aliphatic

hydrocarbon solvent with a flashpoint of about 120°C or higher. The improved performance is demonstrated by the XUD-9 test data in the declaration submitted August 30, 2007, by Dr. John K. Pudelski, an inventor of the present invention, a copy of which is included with this response.

WO 02/102942 does not teach, suggest or otherwise disclose preparing a detergent/dispersant additive for a fuel composition requiring such a solvent. Furthermore, given the limited teachings of the reference with regard to the solvent employed in preparing a fuel detergent/dispersant additive, a person skilled in the art would have no expectation that a medium substantially free of to free of sulphur, where that medium is an aliphatic solvent with a flash point of 120°C or higher, would have improved performance over the solvents taught by the examples in WO 02/102942. The data in the declaration referenced above demonstrates these surprising results. Therefore, the Applicants submit that the present invention is both novel and non-obvious over the prior art. Consequently Applicants' respectfully request the Examiner to withdraw the §103(a) rejections.

The Examiner, in part 4 of the November 15, 2007 Office Action, states that the evidence of unexpected results submitted in the August 30th declaration is not convincing because the data is not commensurate in scope with the claims. The Examiner points out that a specific detergent was used in the examples in the declaration yet the claims define the components broadly. Applicants respectfully disagree.

Applicants have amended claim 1 to specify that the detergent/dispersant additive is the reaction product of a hydrocarbyl substituted acylating agent and an amine and wherein the hydrocarbyl substituent is derived from a polyisobutylene having a number average molecular weight of about 300 to about 5,000. The polyisobutylene succinic compound used in the examples of the declaration is within this narrower claim. The other large categories of detergent/dispersant additives previously included in the claims and listed in claim 20 have been removed and only this type of detergent/dispersant additive remains. Therefore, the data in the declaration, showing the surprising results obtained when using this specific type of detergent/dispersant additive with the described medium, is commensurate with the scope of the claims. Applicants respectfully ask that the rejections be removed.

The Examiner rejected claim 20 under §103(a) as being unpatentable over WO 02/102942 in view of Cunningham (US 5,679,116). Applicants have cancelled claim 20 making this rejection moot.

Applicants have added new claim 21 which specifies that the medium substantially free of to free of sulphur in claim 1 comprises an oil of lubricating viscosity. The medium used in the examples of the declaration is an oil of lubricating viscosity. If the

Examiner still considers the data in the declaration to be incommensurate in scope with claim 1, Applicants strongly disagree but point out that new claim 21, in which both the additive and solvent specified correspond to the examples in the declaration, should not be objectionable on this ground.

Therefore, in light of the above amendments and remarks, it is respectfully submitted that all claims are novel and non-obvious over the above mentioned prior art reference and the rejections should be withdrawn.

Conclusion

For the foregoing reasons it is submitted that the present claims are in condition for allowance. The foregoing remarks are believed to be a full and complete response to the outstanding office action. If the Examiner believes that only minor issues remain to be resolved, a telephone call to the Undersigned is suggested.

Any required fees or any deficiency or overpayment in fees should be charged or credited to The Lubrizol Corporation Deposit Account No. 12-2275.

Respectfully submitted,

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